REMARKS

Entry of this Amendment in supplement to the Amendment filed on January 4, 2005 is respectfully requested.

The present Amendment follows an interview conducted with the Examiner, Michelle Crowell, and her supervisor, Gregory Mills and the undersigned attorney on February 3, 2005. Appreciation is expressed to both Ms. Crowell and Mr. Mills for their courtesy and helpfulness during the course of the interview.

During the interview, advantageous features of pending claims 8-18 were discussed, and will be reiterated below. It was also noted that claims 4-7 pertained to different features of the present invention. In light of the differences between claims 4-7 and claims 8-18, Examiner Mills indicated that a Restriction Requirement would be appropriate since these two groups of claims were directed to two different invention. Accordingly, by the present Amendment, claims 4-7 are cancelled, without prejudice to the Applicants right to proceed with the subject matter of these claims in a related application. With regard to this, it is noted that these cancelled claims 4-7 will be placed in the Continuation application Serial No. 10/985,052 which was filed on November 10, 2004. It is also noted that the claims 1-11 of the Continuation application Serial No. 10/985,052 will be cancelled inasmuch as they are identical to claims 8-18 of the present application. In effect, the Continuation application 10/985,052 will become a Divisional application of the present application since it will contain the claims 4-7 of the present application which Mr. Mills indicated were directed to a different invention during the February 3, 2005 interview.

With regard to the remaining claims 8-18, as discussed during the interview, each of these claims includes the important feature of a discharge confining means

comprised of silicon for surrounding the vacuum processing chamber. This discharge confining means can be read on the element identified with the numeral 37 in Fig. 1 of the application. As noted on page 29, line 7 et seq. of the specification:

> "A discharge confining ring 37 is provided in the processing chamber 10 to increase plasma density and make the reaction inside the processing chamber uniform. The discharge confining ring 37 has gaps for evacuation."

Advantages of this discharge confining ring are discussed, for example, on page 40 of the specification, beginning on line 2. As noted there:

> "In regard to the surrounding of the processing chamber 10, since the plasma is confined in the vicinity of the sample 40 by the discharge confining ring 37, the plasma density is increased and attaching of unnecessary deposits to portions outside the discharge confining ring 37 is minimized."

In addition, as noted on page 40, line 8 et seq., the material for the discharge confining ring 37 can be a semiconductor material or a conductor material such as carbon, silicon, SiC. However, from the Applicants' studies in this matter, it has been determined that silicon provides the best results. In particular, if the discharge confining ring 37 is constructed of silicon, it will have the advantage of being particularly effective for removing fluorine, similar to the susceptive cover 39 and the upper electrode cover 30. The combined effects of the discharge confining ring 37, the upper electrode cover 30 and the susceptive cover 39 in removing fluorine and avoiding undesirable deposits on surrounding walls, is discussed, for example, on page 64, line 14 et seq. As such, by forming the discharge confining ring 37 of silicon, together with forming the upper electrode cover 30 and the susceptive covers 39 of silicon, the substrate is effectively surrounded by these elements which permit

the beneficial effects of removing fluorine to create a more uniform plasma (and, correspondingly, better processing of the substrate).

As noted during the interview, the Ohmi reference fails to teach or suggest a discharge confining means comprised of silicon surrounding a vacuum processing chamber. Indeed, Ohmi does not teach any corresponding discharge confining means surrounding a vacuum processing chamber at all. On the other hand, U.S. Patent 6,074,518 to Imafuku does teach a discharge confining ring 27, shown, for example, in Figs. 1-4 (specifically, two different embodiments of the discharge confining ring). However, this discharge confining ring is described throughout Imafuku as a ground electrode. As noted in the abstract, "a cylindrical ground electrode is provided around the plasma generation region in the chamber, for enclosing the plasma in the plasma generation region." Column 7, line 14 et seq. also refers to the ground electrode 27. As noted in column 8, line 34 et seq., the ground electrode 27 does serve to prevent the undesired scatter of ions outside the space region. However, Imafuku fails to teach or suggest that the discharge ring 27 would be comprised of silicon. As such, Imafuku would not provide the beneficial effects of surrounding the wafer with a silicon discharge confining means, in conjunction with an electrode cover comprised of silicon (or, in a number of dependent claims, a susceptive cover comprised of silicon as well). Therefore, although Imafuku is of general interest in this matter, is it respectfully submitted that claims 8-18, specifically defining the discharge confining means as being comprised of silicon, patentably define over Imafuku.

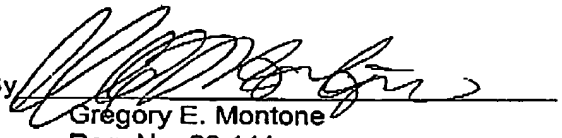
For the reasons set forth above, entry of this Amendment, and allowance of claims 8-18 is respectfully requested.

If the Examiner believes that there are any other points which may be clarified or otherwise disposed of either by telephone discussion or by personal interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to the Antonelli, Terry, Stout & Kraus, LLP Deposit Account No. 01-2135 (Docket No. 520.35237CV4), and please credit any excess fees to such Deposit Account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

By 
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